CLAIMS

WHAT IS CLAIMED IS:

1. A method for inhibiting growth of a tumor comprising introducing into the tumor a defective adenovirus vector comprising a gene encoding an anti-angiogenic factor operably associated with an expression control sequence that provides for expression of the anti-angiogenic factor in a cell of the tumor.

2. The method according to claim 1, wherein the tumor is a lung carcinoma or a breast carcinoma.

3. The method according to claim 1, wherein the anti-angiogenic factor comprises a sequence of an amino terminal fragment of urokinase having an EGF-like domain, with the proviso that the factor is not urokinase.

4. The method according to claim 3, wherein the anti-angiogenic factor is an amino terminal fragment of urokinase having an amino acid sequence of urokinase from about amino acid residue 1 to about residue 135.

5. The method according to claim 4, wherein the urokinase is murine urokinase.

6. The method according to claim 4, wherein the urokinase is human urokinase.

7. The method according to claim 1, wherein the anti-angiogenic factor is angiostatin.

8. The method according to claim 7, wherein the angiostatin comprises kringles 1 to 3.

9. The method according to claim 7, wherein the angiostatin is an amino terminal fragment of plasminogen (Plg) having an amino acid sequence of plasminogen from about amino acid residue 1 to about residue 333.

10. The method according to claim 9, wherein the plasminogen is human plasminogen.

11. A method for inhibiting growth or metastasis, or both, of a tumor comprising introducing a vector comprising a gene encoding an amino terminal fragment of urokinase having an EGF-like domain into the tumor, with the proviso that the gene does not encode urokinase, wherein the gene is operably

associated with an expression control sequence that provides for expression of the gene in a cell of the tumor.

12. The method according to claim 11, wherein the amino terminal fragment of urokinase has an amino acid sequence of urokinase from about amino acid residue 1 to about residue 135.

13. The method according to claim 12, wherein the urokinase in murine urokinase.

14. The method according to claim 12, wherein the urokinase in human urokinase.

15. A defective adenovirus vector comprising a gene encoding an anti-angiogenic factor operably associated with an expression control sequence.

16. The virus vector according to claim 15, wherein the anti-angiogenic factor comprises a nucleic acid sequence of an amino terminal fragment of urokinase having an EGF-like domain, with the proviso that the factor is not urokinase.

17. A defective adenovirus vector comprising a gene encoding an amino terminal fragment of urokinase having an EGF-like domain, with the proviso that the gene does not encode urokinase.

18. The virus vector according to claim 17, wherein the amino terminal fragment of urokinase has an amino acid sequence of urokinase from amino acid residue 1 to about residue 135.

19. The virus vector according to claim 18, wherein the urokinase is murine urokinase.

20. The virus vector according to claim 18, wherein the urokinase is human urokinase.

21. The virus vector according to claim 15, wherein the anti-angiogenic factor is angiostatin.

22. The virus vector according to claim 21, wherein the angiostatin comprises kringles 1 to 3.

23. The virus vector according to claim 21, wherein the angiostatin comprises a nucleic acid sequence of an amino terminal fragment of plasminogen having an amino acid sequence of plasminogen from amino acid residue 1 to about residue 333.

24. The virus vector according to claim 23, wherein the plasminogen is human plasminogen.

25. A pharmaceutical composition comprising a virus vector of any one of claims 15-24 and a pharmaceutically acceptable carrier.

26. Use of the virus vector of any one of claims 15-24 in the manufacture of a medicament for inhibiting growth of a tumor.

27. Use of the virus vector of any one of claims 16-20 in the manufacture of a medicament for inhibiting growth, or metastasis, or both of a tumor.

28. Use of the virus vector of any one of claims 21-24 in the manufacture of a medicament for inhibiting tumor growth and inducing apoptosis.

29. Use of a vector comprising a gene encoding an amino-terminal fragment of urokinase having an EGF-like domain, with the proviso that the gene does not encode urokinase, operably associated with an expression control sequence that provides for expression of the anti-angiogenic factor in the manufacture of a medicament for inhibiting growth or metastasis, or both, of a tumor.

30. The use according to any of claims 26-29, wherein the tumor is a lung carcinoma or a breast carcinoma.